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CW/HW#102: Inscribed/Circumscribed Polygons Applications : CHALLENGE

Due: Monday, March 28th 2016

Directions: Attempt each problem. Show your work and list prior knowledge!

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| 1. The area of the circle is 64pi. What is the area of the square?  quare Inscribed In A Circle | 2. Find the area of the pentagon, if the radius is 4.  entagon Inscribed in Circle | |
| 3. The area of the outside circle is 81pi. Find the area of the inner circle.  wo circles and one square - problem | 4. The area of the square is 128. Find the area of the inner and outer circles.  wo circles and one square - problem | |
| 5. If the side length of the regular hexagon is 6. What is the area of the hexagon?  exagon Inscribed in Circle | 6. Three shapes are placed inside a larger circle with a radius of 12: an equilateral triangle, a circle and a circle that has an area that is half of the other inscribed circle. What is the area of the shaded region?  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2016-03-16 at 9.41.18 PM.png | |
| 7. Which area is larger: the shaded region on the right or the shaded region on the left? Justify your answer numerically. \*Both squares are 2in. x 2in.  http://d2vlcm61l7u1fs.cloudfront.net/media%2Fcd6%2Fcd6d5f9f-2484-4d87-80cb-df2f828fc86c%2FphpAkAt0V.png | | |
| 8. CHALLENGE QUESTION A regular decagon is inscribed in a circle with radius 4 units.   1. ../../../../../Desktop/Screen%20Shot%202016-03-13%20at%201.13.45%20PMFind the side lengths of the regular decagon.      1. Find the area of the decagon.      1. Find the area of the circle.   d. Find the ratio of the area of the circle to the area of the decagon. | | 9. Find the given angle measure for the regular octagon shown.  ../../../../../Desktop/Screen%20Shot%202016-03-13%20at%201.25.09%20PM   1. m∠GJH 2. m∠EDC 3. m∠ABJ |
| 10. Find the given angle measure of the regular hexagon shown.  http://img1.mnimgs.com/img/shared/discuss_editlive/1915355/2012_02_22_09_13_57/1789001.png   1. m∠POQ 2. m∠PQR 3. m∠QTS 4. m∠SOQ 5. m∠UPT | | 11. *WXYZ* is a square inscribed in circle *P*.   ../../../../../Desktop/Screen%20Shot%202016-03-13%20at%2012.55.35%20PM a. Find m∠XPY  b. Find m∠XPQ  c. Find m∠PXQ |

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| Directions: Copy the following notes into your notebook. Failure to copy notes into notebook will result in LaSalle.   An arc length is a portion of the circumference of a circle. You can use the measure of the arc (in degrees)  A sector of a circle is a region bounded by two radii of the circle and their intercepted arc. | |
| Examples | You try! |
| C:\Users\kramos\Desktop\arclength1.PNG | C:\Users\kramos\Desktop\arclength2.PNG |
| C:\Users\kramos\Desktop\sector1.PNG | C:\Users\kramos\Desktop\sector2.PNG |